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10/661,901	09/12/2003	Steve Klotz	48-70 US	8990

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EXAMINER	
JOO, JOSHUA	
ART UNIT	PAPER NUMBER
2454	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/661,901	KLOTZ ET AL.	
	Examiner	Art Unit	
	JOSHUA JOO	2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15, 17-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

This Office action is in response to Applicant's communication filed on February 24, 2010.

Clams 1-15, 17-21 are pending for examination.

Response to Arguments

Applicant's arguments filed February 24, 2010 have been fully considered but they are not persuasive. Applicant argued that:

(1) Regarding claims 1 and 15, extrapolation is the process of constructing new data points outside a discrete set of known data points (Wikipedia). Extrapolation is a prediction and not a search. No teachings of extrapolation process have been found in the cited documents

In response, prediction is one of several definitions of extrapolation. For instance, "extrapolate" may also be defined as "infer: to use known facts as the starting point from which to draw inferences or conclusion about something unknown" (http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861610012); and "infer (an unknown) from something is known" (http://dictionary.reference.com/browse/extrapolate).

Anderson teaches of determining whether there is an entry in a station list array corresponding to an address in a frame (col. 11, lines 39-46, 57-66). If the address is not found, then the address is added to the station list array. A previously unknown indicator of a network element is inferred from known information and indicators.

(2) Regarding claim 7, the Office action equates frames to channels. Anderson fails to teach the essential step of "capturing trace data from a first and second channel on each of the analyzers".

In response, Examiner disagrees that Anderson fails to teach the step, and the Office action is not equating frames to channels. To further clarify, Anderson teaches of capturing frames sent from different

paths by capturing frames sent by a plurality of source stations to different destination stations (col. 10, lines 4-15; col. 11, lines 5-17).

(3) Regarding claim 7, the Office action equates determining topology with calculating statistics. Anderson fails to teach the steps of defining the first and second topology.

In response, Examiner disagrees that Anderson fails to teach the steps, and the Office action is not equating topology with statistics. To further clarify, Anderson teaches of determining which stations are connected on the network, which are part of the statistics information. Wikipedia defines "network topology" as "the physical interconnection of the various elements (links nodes, etc…) of a computer network." Merriam-Webster also defines "topology" as "configuration" (www.merrian-webster.com/dictionary/topology). Newton's Telecom Dictionary defines "Topology" as "The configuration of a communication network" (Newton's Telecom Dictionary, 17th Edition, February 2001). Anderson teaches of determining source stations and destination stations connected to the network by examining source and destination addresses of frames (col. 11, lines 5-17). Anderson teaches of determining connection of nodes on the network by examining the frames, which meets the definition of "topology".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. US Patent No. 5,850,388 (Anderson hereinafter), in view of Borchew et al, US Patent No. 7,173,943 (Borchew hereinafter).

As per claim 1, Anderson teaches substantially the invention as claimed including a method for determining network topology, comprising:

capturing and storing channelized data with a network analyzer (col. 10, lines 5-15. Capture frames for analysis.);

processing the "channelized data" to extrapolate indicators of network elements (col. 10, lines 50-53, 60-65; col. 11, lines 56-62. Calculate statistics including stations on network, e.g. station address. Entries corresponding to addresses of frames.).

Anderson does not specifically teach of interleaving the channelized data into a unitary data stream in chronological order. Anderson teaches of processing channelized data but not the unitary data stream.

Borchew teaches of a protocol analyzer receiving channelized data, interleaving the channelized data into a unitary data stream in chronological order, and processing the unitary data stream (col. 2 lines 4-6, col. 4, lines 45-56; col. 4, lines 15-19. Align X and Y blocks according to time. Merge X and Y channels and filter merged stream. col. 5, lines 50-53. Interleave X and Y blocks.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to interleave channelized data into a unitary data stream in chronological order, and process the unitary data stream. The motivation for the suggested combination is that both teaching similarly deal with network analysis, and Borchew's teachings would improve Anderson's teachings by providing compact time-aligned records of packets for analysis (col. 1, lines 53-54, 57-63; col. 2, lines 21-23).

As per claim 15, Anderson teaches substantially the invention as claimed including a method for analyzing a network to determine a network topology, comprising:

positioning at least one analyzer in communication with the network (col. 7, lines 60-65. Plurality of protocol analyzers.);

capturing channel data trace from each of the at least one analyzer (col. 9, lines 15-20. Frames over network. col. 10, lines 5-15. Capture frames for analysis.);

extrapolating network device presence indicators from the channel data trace (col. 11, lines 5-10. Identify source and destination address of frames.); and

determining the network topology from the network device presence indicators (col. 11, lines 34-40, 56-62. Maintain a station list array corresponding address of frames.); and

displaying the determined network topology to a user (col. 9, lines 21-30. Present results of analysis to user interface.).

Anderson does no specifically teach of capturing a left channel and a right channel data trace from each of the at least one analyzers; combining the left and right channel data traces into a unitary data stream; and processing the unitary data stream.

Borchew teaches of a protocol analyzer capturing left and right channel data trace, combining the left and right channel data trace into a unitary data stream, and processing the unitary data stream (col. 2 lines 4-6, col. 4, lines 45-56; col. 4, lines 15-19. Merge X and Y channels and filter merged stream. Col. 5, lines 50-53. Interleave X and Y blocks.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to extrapolate network device presence indicators as taught by Anderson from a unitary data stream generated by capturing and combining left and right channel trace data as taught by Borchew. The motivation for the suggested combination is that both teaching similarly deal with network

analysis, and Borchew's teachings would improve Anderson's teachings by providing compact time-aligned records of packets for analysis (col. 1, lines 53-54, 57-63; col. 2, lines 21-23).

As per claim 18, Anderson and Borchew teach the method of claim 15. Anderson further teaches wherein determining the network topology comprises analyzing ordered sets, source and destination identifications, device addresses, and ordering of events in the data trace to determine the presence of network devices that correspond to the ordered sets, source and destination identifications, and device addresses (Anderson: col. 25, line 64-col. 26, line 5. Sort list comprising receiving and transmitting stations. col. 11, lines 33-45, 57-61. Station list array comprising source and destination addresses. col. 5, lines 40-46. Sort information and analyze sorted information. fig. 21; col. 30, lines 20-24. Ordered events indicating network elements.).

Claims 2, 3, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Borchew, in view of Blumenau et al. US Patent No. 6,845,395 (Blumenau hereinafter).

As per claim 2, Anderson and Borchew teach the method of claim 1, wherein processing the unitary data stream further comprise determining a topology from the network analyzer (Anderson: col. 11, lines 50-62. Station list array) but not specifically determining a left and right topology.

Blumenau teaches determining a network topology which includes determining a left and right topology (col. 26, lines 52-62. Pairs on left topology. Storage systems on right.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to process the unitary data stream as taught by the suggested system to determine a left and right topology as taught by Chan. The motivation for the suggested combination is that Blumenau's teachings similarly deals with network analysis and would improve the suggested system

by providing a graphical representation of a network topology to enable a user to view and manage a network (col. 24, lines 41-46; col. 26, lines 21-30).

As per claim 3, Anderson, Borchew, and Blumenau teach the method of claim 2 of processing unitary data stream. Anderson and Borchew further comprising analyzing ordered sets, source and destination IDs, and ordering of events in the unitary data stream to determine the presence of network elements (Anderson: col. 25, line 64-col. 26, line 5. Sort list comprising receiving and transmitting stations. col. 11, lines 33-45, 57-61. Station list array comprising source and destination addresses. col. 5, lines 40-46. Sort information and analyze sorted information. fig. 21; col. 30, lines 20-24. Ordered events indicating network elements.).

As per claim 17, Anderson and Borchew teach the method of claim 15, wherein determining the network topology comprises determining a topology for each of the at least one analyzers and combining the topologies to determine an overall topology (Anderson: col. 11, lines 50-62. Protocol analyzer maintains a station list array comprising station addresses.). Anderson does not explicitly teach the topologies as a left topology and a right topology and combining the left and right topologies.

Blumenau teaches determining a left and right topology and combining the left and right topologies (col. 26, lines 52-62. Pairs on left topology. Storage systems on right.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for determining topology for each analyzer as taught by the suggested system to comprise determining and combining a left and right topology as taught by Chan. The motivation for the suggested combination is that Blumenau's teachings similarly deals with network analysis and would improve the suggested system by providing a graphical representation of a network topology to enable a user to view and manage a network (col. 24, lines 41-46; col. 26, lines 21-30).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, Borchew, and Blumenau, in view of Chan et al. US Patent No. 6,243,386 (Chan hereinafter).

As per claim 4, Anderson does not specifically teach the method of claim 3, further comprising analyzing open and close commands in the unitary data stream to determine the presence of a loop.

Chan teaches of analyzing open and close commands to determine the presence of a loop (col. 3, lines 45-50, col. 4, line 10-26. Monitor OPN and CLS primitives and determine complete loop.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the analyzing of the unitary stream as taught by the suggested system to comprise analyzing open and close commands to determine presence of a loop as taught by Chan. The motivation for the suggested combination is that Chan's teachings would improve the suggested system by enabling additional learning and analysis of data for determining network statistics and performance.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, Borchew, and Blumenau, in view of Gundavelli, US Patent No. 6,795,403 (Gundavelli hereinafter).

As per claim 5, Anderson, Borchew, and Blumenau teach the method of claim 3, further comprising analyzing device addresses in the unitary data stream to determine presence of stations (Anderson: col. 11, line 7-10, 35-40, 56-60. Identify addresses to determine stations and corresponding entry.) but do not specifically teach of determining presence of switches.

Gundavelli teaches of analyzing addresses to determine presence of switches (Abstract; col. 5, lines 50-62; col. 10, lines 59-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze device addresses to determine presence of switches. The motivation

for the suggested combination is that Gundavelli's teachings similarly deals with network analysis to identify devices and would improve the network analysis in the suggested system by enabling automatic discover of switch devices on the network for use in network management (Abstract; col. 3 lines 55-59).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, Borchew, and Blumenau, in view of Valentine et al. US Publication No. 2003/0014548 (Valentine hereinafter).

As per claim 6, Anderson, Borchew, and Blumenau teach the method of claim 3, further comprising analyzing the ordering of events in the unitary data stream but not specifically to determine the presence of stealth mode switches.

Valentine teaches of determining the presence of stealth mode switches (Paragraph 0035, 009. Determine presence of switch. Not able to obtain topology information from switch.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze to determine the presence of stealth mode switches. The motivation for the suggested combination is that Valentine's teachings would improve the suggested system by enabling determination of types of network devices and presenting a clearer indication of network topology (Paragraphs 0015, 0017).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Borchew, in view of Danielson, WO 00/31925, Publication Date 02/06/00 (Previously cited and attached, Danielson hereinafter).

As per claim 19, Anderson does not specifically teach the method of claim 18, wherein the ordered sets are analyzed to determine presence of loops on the network.

Danielson teaches of analysis to determine presence of loops on a network (Page 3, line 36-Page 4, lines 1-10; Page 12, lines 12-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze to determine presence of loops on a network. The motivation for the suggested combination is that Danielson's teachings would improve the suggested system by enabling determination of reconfigurable topology of a network (Page 1, lines 3-7).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Borchew, in view of Gundavelli.

As per claim 20, Anderson and Borchew teach the method of claim 18, wherein the device addresses are analyzed to determine presence of stations on the network (Anderson: col. 11, line 7-10, 35-40, 56-60. Identify addresses to determine stations and corresponding entry.) but do not specifically teach of determining the presence of switches.

Gundavelli teaches of analyzing addresses to determine presence of switches on a network (Abstract; col. 5, lines 50-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze device addresses to determine presence of switches. The motivation for the suggested combination is that Gundavelli's teachings similarly deals with network analysis to identify devices and would improve the network analysis in the suggested system by enabling automatic discover of switch devices on the network for use network management (Abstract; col. 3 lines 55-59).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Borchew, in view of Valentine.

As per claim 21, Anderson and Borchew teach substantially the invention as claimed including the method of claim 18, wherein the ordering of events is analyzed but not specifically to determine the presence of stealth switches on the network.

Valentine teaches of determining the presence of stealth mode switches (Paragraph 0035, 009. Determine presence of switch. Not able to obtain topology information from the switch.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze to determine the presence of stealth mode switches. The motivation for the suggested combination is that Valentine's teachings would improve the suggested system by enabling determination of types of network devices and presenting a clearer indication of network topology (Paragraphs 0015, 0017).

Claims 7-10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, in view of Matheny et al. US Publication No. 2002/0161883 (Matheny hereinafter).

As per claim 7, Anderson teaches substantially the invention as claimed including a method for determining network topology during a network analysis process, comprising:

positioning a plurality of network analyzers in communication with the network (col. 7, lines 60-65. Plurality of protocol analyzers.);

capturing trace data from a first and second channel on each of the analyzers (col. 9, lines 15-20. Frames over network. col. 10, lines 5-15. Capture frames for analysis.);

determining a first topology corresponding to the first channel of each of the analyzers;

determining a second topology corresponding to the second channel of each of the analyzers (col. 10, lines 50-53, 60-65. Calculate stations on network, .e.g. station address.);

combining first and second topologies from each of the analyzers to generate the network topology (col. 10, lines 50-62. Station statistics including addresses calculated and put into a station array list.).

Anderson does not specifically teach of deleting duplicate topology entries from the combined topology to generate the network topology.

Matheny teaches of a network management system wherein discovered information is combined and duplicate entries are deleted (Paragraphs 0024-0025).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to generate a topology as taught by Anderson by deleting duplicate entries as taught by Matheny. The motivation for the suggested combination is that Matheny's teachings would improve Anderson's teachings by eliminating any redundant data, thus reducing complexity of processing data (Paragraph 0002).

As per claim 8, Anderson and Matheny teach the method of claim 7. Anderson further teaches wherein positioning the plurality of network analyzers further comprises positioning the analyzers such that bidirectional communication between each network element may be captured in a data trace (col. 7, lines 60-65. Network analyzers, each monitoring different or segment of a network. col. 10, lines 43-48. Data for each station includes frames transmitted and received.).

As per claim 9, Anderson and Matheny teach the method of claim 7. Anderson further teaches wherein capturing the trace data further comprises storing channelized data for subsequent processing (col. 10, lines 9-15. Contents of frames are temporality stored in memory.).

As per claim 10, Anderson and Matheny teach the method of claim 7. Anderson further teaches wherein determining the first and second topology comprises analyzing ordered sets, source and destination identifications, device addresses, and ordering of events in the trace data to determine the presence of network elements that correspond to the ordered sets, source and destination identifications, and device addresses (Anderson: col. 25, line 64-col. 26, line 5. Sort list comprising receiving and transmitting stations. col. 11, lines 33-45, 57-61. Station list array comprising source and destination addresses. col. 5, lines 40-46. Sort information and analyze sorted information. fig. 21; col. 30, lines 20-24. Ordered events indicating network elements.).

As per claim 14, Anderson and Matheny teach the method of claim 7. Anderson further teaches the method comprising displaying the network topology to a user via a graphical user interface (col. 9, lines 21-30. Present results of analysis to user interface.).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Matheny, in view of Chan.

As per claim 11, Anderson does not specifically teach the method of claim 10, further comprising analyzing open and close commands in the trace data to determine the presence of a loop on the network.

Chan teaches of analyzing open and close commands to determine the presence of a loop (col. 3, lines 45-50, col. 4, line 10-26. Monitor OPN and CLS primitives and determine complete loop.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the analyzing of the unitary stream as taught by the suggested system to comprise analyzing open and close commands to determine presence of a loop as taught by Chan. The motivation for the suggested combination is that Chan's teachings would improve the suggested system by enabling additional learning and analysis of data for determining network statistics and performance.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Matheny, in view of Gundavelli.

As per claim 12, Anderson and Matheny teach the method of claim 10, further comprising analyzing the device addresses in the trace data to determine the presence of stations on the network (Anderson: col. 11, line 7-10, 35-40, 56-60. Identify addresses to determine stations and corresponding entry). Anderson does not specifically each of determining the presence of switches.

Gundavelli teaches of analyzing addresses to determine presence of switches (Abstract; col. 5, lines 50-62; col. 10, lines 59-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze device addresses to determine presence of switches. The motivation for the suggested combination is that Gundavelli's teachings similarly deals with network and would improve the network analysis in the suggested system by enabling automatic discover of switch devices on the network for use network management (Abstract; col. 3 lines 55-59).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Matheny, in view of Valentine.

As per claim 13, Anderson and Matheny teach the method of claim 10, further comprising analyzing the ordering of events in the trace data but not specifically to determine the presence of stealth mode switches on the network.

Valentine teaches of determining the presence of stealth mode switches (Paragraph 0035, 009. Determine presence of switch. Not able to obtain topology information from the switch.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to analyze to determine the presence of stealth mode switches. The motivation for the suggested combination is that Valentine's teachings would improve the suggested system by enabling determination of types of network devices and presenting a clearer indication of network topology (Paragraphs 0015, 0017).

Conclusion

Examiner has cited particular sections from the reference(s) that are applied to the claims. While the sections are cited for convenience and are representative of the teachings of the prior art(s), other sections of the reference(s) may be relevant and applicable to the claims. It is respectfully requested that Applicant fully consider the reference(s) in its entirety when responding to the Office action.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/J. J./
Examiner, Art Unit 2454

/NATHAN FLYNN/
Supervisory Patent Examiner, Art Unit 2454